1: Handy E-5 (1920-1921)1923 OX6 Marquesas OX6

227 The practice in the Marquesas of a method of fishing common in the Tuamotus and Tahiti is indicated by the translation of the words *auo'a, kauo'a* as given by Dordillon (8)—that is, the practice of hemming in fish in shallow water by means of long braids of leaves. This method must have been little used in the Marquesas on account of the rare occurrence of reefs and shallow water.

227 The process of making the cord for fishing nets was called *fi'o na aho.* For the work a special shelter (*oho au*) was erected and consecrated. This ● 286 was built in the form of the regular dwelling with a sloping rear wall ascending direct to the ridge, closed ends, and the lower half of the front fishermen. According to Dordillon (9) the fishermen had to fast three days before making the net. The manufacture of the net was accomplished in a consecrated shelter (*oho au*) by the seashore within the sacred precincts of the fishermen. The second netful taken in the deep-sea fishing with the new net was always given to the women who made the cord.

A festival (*ko'ina upena*) was celebrated at the seashore upon the completion of a new net. Food was prepared up the valley and carried down to the fishermen's precincts. All the tribe attended and feasted, but only those who were free from *tapu* were allowed to enter the precincts and the house where the net was kept.

Deep-Sea Fishing at Atu Ona

226 Deep-sea fishing and the net with which it was done were alike called *upena.* At Atu Ona, the evening before the men went fishing, the *pu'e* was always intoned in the ceremonial house by the *ava-ika-nui.* There were many images (*tiki*) of different fishing gods used, all the gods thus associated with deep-sea fishing being known by the collective term, *e au upena.* [778] The *tiki* were small stone figures, some of them, if not all, carved roughly in the form of a fish. One *tiki* was used at a time, the others being kept buried in the ground. When a fishing venture had been unsuccessful during the time that a certain *tiki* had been presiding in the shrine, this image would be buried in the ground and another placed in its stead. The new image would retain the place as long as the fishermen's luck showed his *mana* to be efficacious. It is said that no fish was offered to the *tiki* here. At Ta'a Oa, on the other hand, I was told that the first fish were always offered to the god. It is probable that part of the first netful, which was reserved for the fishermen, was presented by them to their god.

The net was regarded as extremely sacred (*tapu oko*). It was square, from thirty to thirty-six feet across, and had on each side a strip of ironwood, to each end of which a line was attached. In the center of the net was a round basket-like section, like the crown of a hat, about eight feet in dia-

[Text continues on p. 172. - Analyst]

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KAOA FISHING

The professional fishermen devoted themselves sometimes to catching the *kaoa*, a small fish which at certain times was very plentiful in the bays. The net (*upena kaoa*) used was small and could be handled by two men. It was let down on the bottom in shallow water. Then the men struck the water with their hands, driving the *kaoa* into the net.

SHARK FISHING

Catching the hammer-headed shark (*matake*) was a more elaborate undertaking. For this there was a special net called *upena fiifii*. This was a large, coarse net, the cords of which were made by women in the same manner as were those for the *upena*. The cords for the *fiifii* were dyed red with red earth. In the process of making them the heavy cord was rolled on a piece of wood rather than on the knee in the way that the *upena* cords were made. One margin of the net was anchored to the bottom, while the other was held up by floats on the surface. If the *tuhuna* observed *matake* passing a certain point, ten or twenty nets would be put out at this place at night, left there, and taken in with their catch next morning. The *matake* were caught and held in the meshes of the net by their gills.

Sharks were sometimes caught by the following ingenious method: (Whether or not this is a recently introduced method I am uncertain—the use of knives would suggest that it has been introduced.) A number of men would go out in a canoe, one man at the bow dragging in the water a piece of meat on a cord. The others had nooses of cord ready, being seated along the sides of the canoe. When a shark came up, swimming alongside, scenting the meat, one or two nooses were slipped over the fore and hind part of his body, the cords pulled taut, and the shark was killed with knives before it could injure the canoe.

CATCHING OCTOPUS

There were several methods of catching octupus (*feke*). One was by diving with several sticks, thrusting one of these into the octopus in its hole, waiting a moment until it had begun to occupy its arms with this, then thrusting the other into it in the same way. When all the arms of the octopus were occupied with the sticks, the body was seized with the hands and dragged out of the hole. The animal was killed by a bite on the top of the head, after which the stomach was quickly turned inside out.

Again, a line with three hooks attached to it was sometimes used. Near the hooks a white stone that could be seen under water was tied. This

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IMPLEMENTS FOR COLLECTING AND PREPARING BREADFRUIT

Breadfruit is still the Marquesan staple, and utensils for collecting and preparing it form part of the equipment of every family. These utensils may be divided into two classes, those used in collecting and transporting the fruit, and those used in preparing it for food.

NETS AND CARRYING STICKS

Breadfruit nets are of two sorts, small picking nets and large carrying nets. The picking net consists of shaft and head.

The shaft is a long straight pole of some light wood, usually fau. The head consists of a net woven on a forked stick, one foot to 18 inches long. The fork is tied to the shaft and is bent backward so that it stands almost at right angles to the shaft. The wood of a tough vine is usually used for the fork, the angle being given by bending the wood while green and tying the prongs back to the shaft until the wood dries. Within the fork, which is six to eight inches long, a small net is woven having a depth of eight inches to one foot. Commercial string is used for these nets, replacing the sennit of former times. The mesh of the net is large and the knot is like an European square knot. In use, the picker is lifted until the fruit is enclosed in the net; the stem is then caught in the angle of the fork and broken by a slight twist. The fruit are usually picked one at a time and transferred from the picking net to the carrying net, which is hung in the trees near the picker. The average carrying net is about 18 inches in diameter and three feet deep. This net (Pl. LVII, *A*) is also usually made of commercial cord, although sennit is still used. The top of the net is held open by a hoop made from a sapling about three-fourths of an inch in diameter, which has been steamed in an earth oven until it is pliable, bent until the ends overlap, and the juncture covered with many laps of cord. The net is suspended from the carrying stick by three ropes of twisted bark, woven together in the center to form a loop, the ends of ropes being tied to the hoop at equal intervals. The bottom of the net is finished with a ring about two inches in diameter made from two strands of sennit. About this ring the bottom strands of the net are passed in closely spaced double half hitches.

Carrying sticks (for transporting the fruit to the house) are simply poles one and a half to two inches in diameter cut from the nearest clump of fau. In ancient times, more carefully made carrying sticks are said to have been used; smoothly finished, and with notches at either end protected by a raised flange. No specimens were seen, and it is probable that even then ordinary carrying sticks were nothing more than saplings.

IMPLEMENTS FOR PREPARING BREADFRUIT

The implements used in preparing breadfruit vary according to whether the fruit is to be made into *ma* and stored, or is to be eaten at once. In *ma* making large numbers of the fruit are gathered and piled up to ripen. The ripening is hastened by piercing each fruit at the stem end with a pointed stick (Pl. LVII, *D*) or with a piece of crushed bamboo. When the bamboo is used, it is broken off at the surface each time, leaving a fragment of the bamboo in the fruit.

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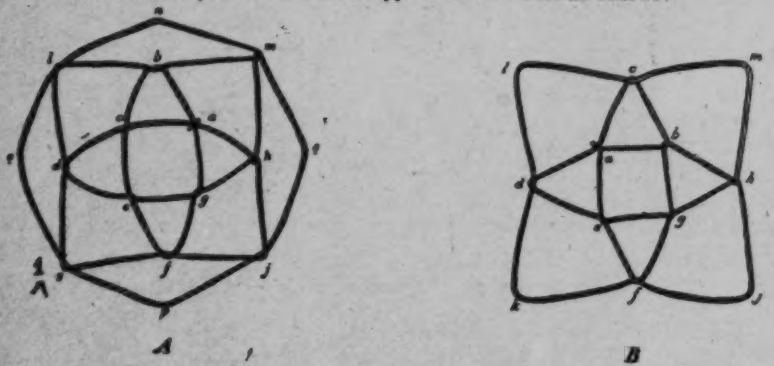
GOURDS

The Marquesans appear to have made a rather limited use of gourd containers. No gourd plants were seen growing, but from a comparison of the utensils collected with those in the Bishop Museum the species was probably *Lagenaria vulgaris*. According to informants, both necked bottles and neckless containers were formerly used, but all the specimens seen were neckless and were called by the natives *hue*. To make a *hue* the ripe gourd was plucked from the vine while still soft and the stem and adjacent shell cut away to form a round aperture three inches or more in diameter. The seeds and pulp were emptied out and the shell carefully dried in the shade. The interior was then scoured smooth with beach sand. Utensils of this sort appear never to have been decorated and ornamental shapes made by deforming the growing fruit had never been heard of by the informants questioned. All the *hue* seen were comparatively small, the largest being slightly under one foot in diameter, but the size of some of the wooden *hue* tops seen in burial caves would indicate that much larger utensils of this sort were formerly used. (See Pl. LVIII, *E*).

When in use the *hue* was supported and protected by a network of cords similar in principle to the Hawaiian *koko* (net), but rather inferior in design and execution. The manufacture of these nets has been discontinued and only two specimens were seen in the group, both in Pua Ma'u, Hiva Oa. Both were made of coconut fiber cord. Ordinary sennit of the sort used for house lashings was used for one specimen, and for the other, a flat five strand plait. The form of the nets may be seen from the accompanying sketches. For *hue* No. 1, on Plate LVIII, *E*, the process of manufacture appears to have been as follows:



A *B*

FIGURE 7.—Sketches of network of cords used to support gourd containers.

[this should be k, in light of description on page 358—Analyst]

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A large loop was first formed, one end of the cord being tied and left at *A*. (See fig. 7, *A*.) The loops *abc*, *cde*, and *efg* were then made in the order named. The direction was then reversed and the loops *ghij*, *jkl*, and *dlb* formed. The direction was then again reversed and the loops *bmnl*, *lok*, *hpj*, and *jgm* made. From *m* the cord was carried to *h* and thence to *a*, where it was knotted in beside its other end. The points *n*, *o*, *p* and *q* projected above the top of the *hue* and served for suspension. The dimensions of the different meshes are: *a* to *c*, 4½ inches; *a* to *b*, 4½ inches; *b* to *l*, 6¼ inches; *l* to *n*, 5 inches. The mesh, with the exception of the outermost loops, is drawn to scale. The knot employed is uniform except at the points *h* and *a*. It is a complicated wrap knot for which no name is known.

The net of *hue* No. 2 on the same plate, although superficially resembling that of *hue* No. 1, is made on an entirely different principle. (See fig. 7, *B*.)

The netting was not begun with a ring, the course of the cord being *a*, *b*, *c*, *a*, *d*, *e*, *f*, *g*, *h*, *i*, *f*, *k*, *d*, *l*, *c*, *l*, *h*, *b*, *g*, *e*, to *a*. Here the two ends are spliced together into a single cord of the size used throughout and tied about the line *cd*. A loop of cord was passed through the outermost meshes at *l*, *m*, *k* and *j*, to serve as a handle, its ends being tied together in a heavy knot. The mesh sizes are: *a* to *b*, 4¼ inches; *a* to *d*, 5 inches; *d* to *l*, 7½ inches. Two types of wrapped knots were used in different parts of the net.

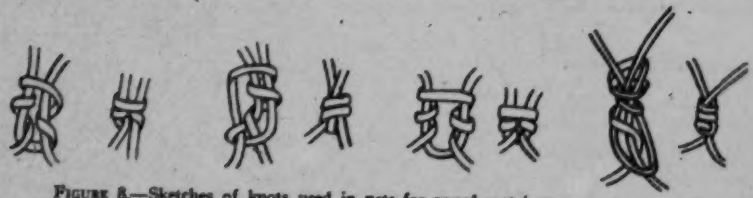

FIGURE 8.—Sketches of knots used in nets for gourd containers.

The widely divergent technique of the two specimens would seem to indicate a considerable variety for these objects in ancient times.

Gourd *hue* were normally provided with wooden covers, which were all made according to a fixed pattern. To one ignorant of its use such a cover would appear to be a small squat broad mouthed jar, with a rounded bottom, flatly convex to hemispherical body, a short neck whose sides sloped inward slightly toward the top, and a wide flat shoulder whose upper surface sloped inward and downward to the base of the neck. When used as a cover, the jar was inverted, the neck fitting into the orifice of the *hue*, the shoulder resting upon its top. The body of the cover rose above the *hue* as a small dome, and was frequently carved, the decoration consisting of two tiki faces placed opposite each other. The space above and between these faces was filled with shallow parallel grooves running continuously from edge to edge. In spite of their form, *hue* tops appear never to have been used as separate containers, and they were probably hollowed only for the sake of lightness. (See Pl. LVIII, *F*.)

[this should read jqm, in light of illustration on page 357. —Analyst]

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6

by a single horizontal or vertical hole. The square end has along either side two to six notches which are used to facilitate tight lashing of the bone barb. In the specimens examined there was also a short longitudinal groove in the center of the lower surface which served no practical purpose. The point of the hook is of bone, with a slight but well marked barb just behind the tip on the lower side. The modern Tahitian and Tuamotuan hooks of the same type are usually barbless. The base of the bone point is pierced with two holes. The point is attached to the strip by close lashings, formerly of coconut fiber cord. The ends of the lashings are gathered together into a single strand at the forward end of the bone point and carried along the upper surface of the strip to its pointed end, where they are again attached to it by lashings passed through the hole in the strip. The strand is continued beyond the hook and serves to attach the whole to the line. As the lashings at the inner end of the hook are loose enough to allow some play, the pull of the line comes directly at the base of the bone point. When a fish strikes, the pull is said to draw the point slightly downward and inward, making escape more difficult. This movement, if it occurs at all, is negligible, but the pull coming at this point does serve to tighten the lashings and prevent the point from slipping on the strip. The barb upon the point is of little value, and unless a tight line is kept the fish will escape. 227

In some hooks of this type a small bunch of pig's hair is tied transversely at the rear end of the strip as an additional lure but this is not a constant feature (Pl. LXXI, *B*, 1). In one specimen collected an additional strip of shell is tied to the upper side of the main strip, probably with the idea of strengthening and weighting the hook. [23]

That sinkers were employed in line fishing is shown by two terms given by Dordillon (17): *pokau*, which is defined as a sinker, and *pokoe*, which is defined as a stone twisted with a fish hook which falls off when the hook sinks to the depths. It seems probable that such sinkers were unworked pebbles.

Dordillon also gives a term (*pe'etai*) which he translates as "to fish with a line while swimming" but this method is now obsolete and no information was obtained in regard to it.

NETS

Net fishing was probably the most important of the Marquesan methods of fishing, and a considerable variety of nets were employed. Very few of these nets have been preserved in collections, however. The only specimens studied were two imperfect fragments in the Bishop Museum. One of these fragments evidently formed part of a small net in the form of a flat pouch or envelope with square corners. (Pl. LXXI, *C*). 227 286

The net is woven of two-strand fau bark cord hardly more than 1/32 of an inch in diameter with a very small mesh decreasing in size from 3/8 of an inch at the bottom to 3/16 of an inch at the top. The upper edge is finished with a single strand of twisted fau bark cord about three times as heavy as that forming the body of the net. Immediately below this edging a second cord of the same weight runs around the net, apparently serving as a drawstring. The second fragment is so badly torn that the original form of the net cannot be determined. It is woven of extremely fine two-strand pineapple fiber cord scarcely heavier than carpet thread, with a uniform mesh of 5/8 of an inch. The form of knot employed in both nets may be seen from the accompanying drawing (fig. 11).

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227 The only large nets used in modern times are long seines woven from
286 commercial cotton cord with needles and spacers of ordinary European form. Small circular hoop nets and flying fish nets are also made from cotton cord of

FIGURE 11.—Drawing of knot used in fish nets.

finer grade. A netting needle, similar to that used in Hawaii, is used to make these nets. The work is begun at the top and the envelope is held open, as the work progresses, by pointed strips of bamboo.

226 The natives of Pua Ma'u, Hiva Oa describe ten varieties of net formerly
227 made and used, as follows:

(1) **Timaaa:** A circular bag net about three feet deep and two feet in diameter woven of either fau bark or coconut fiber. Three ropes were attached to the upper edge of this net at equal intervals, and were woven together into a single strand above its center. A large stone was placed in the bottom as a sinker, and the skin of a squid was attached to the juncture of the ropes as bait. The net was allowed to lie on the bottom for some time, and was then pulled up, the pull of the ropes closing the net and imprisoning any fish within it.

(2) **Maa:** A small dip net with a wooden hoop and pole, usually made of pineapple fiber.

(3) **Ho'ohe to'o:** Same as *maa*, except for the size of the net. *Ho'ohe* is the name of a small fish.

(4) **Puño:** Same as the *ho'ohe to'o*, but of larger mesh and heavier material. This was used to catch crabs on the rocks.

(5) **Puño Mao'o:** Net used for flying fish. There is some doubt whether this form is aboriginal, its introduction is ascribed by some to early Hawaiian missionaries and by others to certain Gilbert Island fishermen who at one time lived in the Marquesas. The modern flying fish net consists of a small bag net woven between the prongs of a forked stick, the outer edge being held taut by the tension of the sticks. Fork and net are attached to the end of a pole 10 to 15 feet in length. This form of net is used only in night fishing from canoes. A large torch is set up in the canoe and the flying fish, attracted by the light, rise to the surface and lie there. The net is slapped down over the fish, which jump upward and become entangled in it. The man using the net stands up, and as the native fishing canoes are extremely narrow and unsteady it is an exciting sport.

(6) **Puño ihe:** A net identical with the flying fish net except for its smaller size. It is used for *ihe*, a variety of small fish.

(7) A special net was used in the Island of Ua Pou for catching parrot fish. The name of this net had been forgotten. It is said to have been about three feet square. The top was held open by crossed sticks. To the juncture of these sticks a live parrot fish was tethered by the gill. The net was then towed along the rocks where parrot fish were plentiful. According to the natives, each parrot fish has a special area from which it feeds, driving off invaders of the same species, and as soon as the tethered fish entered such a private domain the owner came out and attacked it. The net was then drawn up.